



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/897,896	07/05/2001	Sara Bern	2789-41	4353

7590 06/16/2005

NIXON & VANDERHYE P.C.
8th Floor
1100 North Glebe Rd.
Arlington, VA 22201-4714

EXAMINER

AGDEPPA, HECTOR A

ART UNIT

PAPER NUMBER

2642

DATE MAILED: 06/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/897,896

Applicant(s)

BERN ET AL.

Examiner

Hector A. Agdeppa

Art Unit

2642

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is in response to applicant's amendment filed on 10/19/2004. Claims 1 - 49 are now pending in the present application. **This action is made final.**

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1 – 8, 11, and 22 - 26 are rejected under 35 U.S.C. 102(e) as being anticipated by US 6,498,843 (Cox).

As to claims 1 and 26, Cox teaches a system and method intercepting and monitoring signals in a network wherein the system comprises a plurality of switching nodes 110a – 110c, the switching nodes having routing means for routing calls throughout communications network 100. (Fig. 1, Col. 4, lines 12 – 31, Col. 4, line 36 – Col. 5, line 14)

Cox further teaches some manner of service provision means for providing predetermined services that are located/included in the above-mentioned switching nodes as well as in a signaling transfer node 150 (Fig. 1) because these nodes interwork and interconnect to provide services such as initiating, routing, and receiving telephony calls, as well as controlling fax machines, computers, etc. (Col. 4, line 57 –

Art Unit: 2642

Col. 5, line 5) Inherently of course, initiating, receiving, and routing calls or data means that a user of any of the above-mentioned services requests that service.

Finally, Cox teaches including user information in an initial address message (IAM) message, for example. IAM messages are the common and standard way of setting up any call or communication in an advanced intelligent network (AIN). Moreover, such added information may be a user's target telephone number or some other item of information such as a virtual private network number, a credit card number, a personal identification number (PIN), a prepaid calling card number, or even a third party billing number. (Col. 2, lines 7 – 16, Col. 7, line 51 – Col. 8, line 28)

While it is not specifically discussed in Cox, which element or means adds the above-mentioned user information to the IAM, it is noted that SSP 250 (Fig. 2) sends the IAM message to STP, wherein SSP 250 is a part of one of the above-mentioned switching nodes. (Col. 5, lines 24 – 29, Col. 7, lines 46 – 50, Col. 8, lines 14 - 28)

As to claims 2 - 5, Cox further teaches that when a signal associated with a user's target telephone number or some other item of information such as a virtual private network number, a credit card number, a personal identification number (PIN), a prepaid calling card number, or even a third party billing number, is detected, means in the switching node will intercept the call. This information is read as the claimed predetermined trigger information inasmuch as it is a signal associated with this information that triggers call interception. (Col. 2, lines 7 – 16, Col. 4, lines 1 – 35, Col. 6, lines 22 – 37, Col. 8, lines 14 – 46)

Note that the target telephone number or other information may be associated with a calling/call initiating party. (Col. 11, lines 17 – 28)

Note also, that as discussed above, it may be any of the switching nodes that detect the trigger information.

Finally, as discussed above, switching node also comprises routing means and that operation of the system of Cox involves intercepting a call and rerouting the call so that the call may be monitored. (Col. 5, lines 24 – 38, Col. 8, lines 29 – 50)

As to claim 6, Cox teaches that the intercepting means in the switching nodes, as well as the signal transfer nodes, have tables and memory associated therewith for storing trigger information, tags, etc. Moreover, Cox teaches that these tables and trigger information may be added/changed/updated by an operator; therefore, meaning some management means is inherent. Cox also teaches a table access facility 212 (Fig., 2) which may be read as the claimed interception management means. (Col. 5, lines 31 – 60, Col. 6, lines 14 – 21, Col. 6, line 57 – Col. 7, line 12)

As to claim 7, Cox teaches that the once a call signal is detected, information therefrom is sent to the call interception means via the use of triggers and tags so as to activate the interception function and to determine how to further process the call. (Col. 7, line 39 – Col. 8, line 58)

As to claim 8, Cox teaches that upon intercepting a call, the call signaling is duplicated so that it may be routed both to a monitoring agency such as law enforcement personnel, while allowing the call to continue to its original terminating

Art Unit: 2642

destination, thereby reading on the claimed 3-way conference call. (Col. 2, lines 55 – 62, Col. 4, lines 19 – 35, Col. 8, line 47 – Col. 9, line 4, Col. 11, lines 17 – 47)

As to claim 11, such is inherent in the system of Cox or any AIN system. As discussed above, Cox teaches being able to handle calling card calls. If a user invokes a calling card service to connect for example, a long distance call, the service provisioning means must know that the call is of this type or else, there would be no way to properly and correctly bill or process the call. If the service is third party billing number, as discussed above as well, this information identifying the user and service must be included in the identification information so that the switching nodes and signaling transfer nodes knows how to process the call.

Furthermore, Cox teaches the use of call treatment tags that are used and added to messages such as the above-mentioned IAM messages, as well as other call type identifying information, and recognizing when specialized call treatment is requested. (Fig. 6, Col. 5, lines 39 – 54, Col. 7, line 51 – Col. 8, line 28)

As to claims 22 and 23, Cox teaches using the signaling system 7 (SS7) protocol as well as other transmission protocols. (Col. 5, lines 6 – 14, Col. 6, lines 51 – 56 of Cox) Messages such as the IAM messages, as well as other messages that are standard in SS7 must inherently have predetermined fields and data types. This is how such protocols, whether in telephony or data communications, work. Because as discussed above, the system of Cox is able to insert various tags and action fields into an IAM message, for example, without disrupting the basic operation and function of an IAM message, it is inherent that some fields are not used. Furthermore, inserting and

Art Unit: 2642

appending telecommunications and data communications messages/packets with information is old and well known and protocols intentionally leave open fields or space in such messages/packets for this very reason, i.e., to allow some specific manipulation by whomever is using the protocol.

Also, it is common practice to allow manipulation of certain data fields, again, as long as the basic operation and functionality of a message/packet is not disrupted. Cox teaches that data fields such as those that store the date and time of a call must constantly be manipulated for each call inasmuch as each call will have different date and time values. (Col. 7, lines 51 – 59 of Cox) Also, IAM messages have flag fields as taught by Cox. (Col. 8, lines 25 – 28 of Cox) These flag fields can have different tags inserted therein at different points during a call, suggesting another type of data manipulation wherein data that is already in a field is altered or replaced. Cox teaches that during a call, the IAM message from switching node 110a to node 110b will have a call treatment tag 22 inserted therein, whereas the same call, when going from switching node 110b to STP 150, tag 23 is inserted in the flag field.(Col. 7, lines 60 – 67, Col. 8, lines 29 – 42 of Cox)

As to claims 24 and 25, see the rejection of claims 22 and 23. Note that the above-mentioned inserted tags are used, for example, by STP 150 to access its own trigger table to effect the desired call processing for the call. Because the trigger tables have key field and action fields which contain, for example, the target telephone number, of calling card number, credit card account, etc, as discussed above, and it is the tags that are used to find the associated trigger table information, it is inherent that

Art Unit: 2642

the user identification information is sent in the fields discussed above in claims 22 and 23.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 9, 10, 12 – 21, and 27 - 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,498,843 (Cox) in view of US 6,370,241 (Clark).

As to claim 9, see the rejection of claim 1 regarding SSPs, which would inherently employ a service switching means.

Art Unit: 2642

Also, signaling transfer node/point 150 (Fig. 1) reads, in one interpretation on the claimed service control means in that the switching nodes, upon detecting the trigger information, as discussed above, will suspend the call, and communicate with the signaling transfer node so as to get the information needed/instructions needed to process the call. Such processing involves using the trigger information to associate the call with tags/keys in the signaling transfer node's trigger table and therefore glean the proper call handling instructions. (Col. 7, line 51 – Col. 8, line 45 of Cox)

What Cox does not teach is the service control means sending the user information to the service switching means.

However, such operation is merely a description of the standard operation of any AIN system wherein a service control point (with service control means/functionality) is used as a database containing user information and call processing instructions. Such is described with regard to calling card services in Clark, wherein a calling card call is suspended by a service switching point or service switch 22 (Fig. 1 of Clark) and after the switch has interacted with a service control point 30 (Fig. 1 of Clark), the service control point sends instructions and data such as user identification/account information back to the service switch to allow call processing to continue. (Col. 3, line 47 – Col. 4, line 58 of Clark)

It would have been obvious for one of ordinary skill in the art at the time the invention was made to have combined the above functionality of Cox with the functionality of Clark inasmuch as such would likely be inherent or at the least obvious because in any AIN system, calls relating to specific services and users (such as calling

Art Unit: 2642

card services) must be identified and associated with a user and an account to allow continued call processing. This is the premise of AIN communications. Moreover, while Cox implements some service control functionality in a signaling transfer point, it is also old and very well known in the AIN arts to move functionality around from element to element based on design preferences relating to speed of operation, redundancy of database information, speed of database access, etc. Again, as mentioned above, Cox does not specifically mention where the user identification information comes from, but regardless it must come from one of the AIN system elements.

As to claim 10, see the rejection of claims 6 and 9.

As to claim 12, neither Cox nor Clark teach user updating of account information, but such a limitation is inherent or at the least obvious to one of ordinary skill in the art at the time the invention was made. Such a limitation merely relates to user management of their account. As discussed above, Cox and Clark contemplate calling card, credit card, and third party billing calls. Somehow, user information/data must be put into the system and must allow for updating. See Col. 6, lines 28 – 32 of Cox wherein it is taught that somehow, user information can be changed. Whether this is by an operator or the user is old and well known. For example, in calling card systems as well as voice mail systems, it is common practice to allow a user to implement their own PIN number and be allowed to change it. This only has to do with user-friendliness of the service.

As to claim 13, see the rejection of claims 1 – 5, 7, and 12.

As to claims 14 and 15, see the rejection of claim 12. Again, what neither Cox nor Clark teach is accessing user data via a computer over the Internet. However, it is again, very old and well known to access and modify user account information or preferences using the Internet. It would have been obvious for one of ordinary skill in the art at the time the invention was made to have allowed for such functionality inasmuch as this method of accessing and modifying information is merely one of a plurality of methods already known and used in the telephony arts for such a purpose. While Cox and Clark do not address this limitation, this is simply because the references focus on the call handling aspect of their inventions. Such limitations regarding account modification are only user-friendly features that do not affect the call processing and interception aspects of their respective systems.

As to claim 16, such a limitation only relates to how invasive a monitoring agency can be and such would be obvious to one of ordinary skill in the art at the time the invention was made inasmuch as it merely relates to how much access of user data is allowed.

As to claim 17, Cox teaches being able to sense and intercept based on a user changing user data. (Col. 6, lines 28 – 32 of Cox)

As to claims 18 and 19, see the rejection of claims 1 – 5, 9 – 13, and 17. Note that because interception and monitoring a call or signal involves replicating the call or any service, any change to-be implemented by a user changing his/her data could be monitored since such a change would be reflected in signals that would effect that change in the system. See also Col. 8, lines 47 – 58 of Cox.

Art Unit: 2642

Also, if a change is detected, it is inherent that information would be sent along with the user information because all the information sent and received by the system elements, as discussed above, are tagged with or already include user information. Therefore, some type of user data change message is sent.

And again, if signals can be monitored and a signal represents a change in user information, the changes performed could be monitored and sent to the monitoring agency/personnel.

As to claim 20, see the rejection of claims 6 and 18.

As to claim 21, see the rejection of claims 18 and 19.

As to claim 27, see the rejection of claims 1, 12, 16, and 17.

As to claim 28, see the rejection of claim 13.

As to claims 29 and 30, see the rejection of claims 14 and 15.

As to claims 31 and 32, see the rejection of claims 18 and 19.

As to claim 33, see the rejection of claim 20.

As to claim 34, see the rejection of claim 21.

4. Claims 35 – 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,498,843 (Cox) in view of US 6,097,719 (Benash et al.)

As to claims 35 and 44, see the rejection of claims 1 and 26.

What Cox does not teach is having virtual subscribers.

However, virtual subscribers and virtual numbers are notoriously old and well known in the telephony arts as seen in Benash et al. (Abstract, Col. 16, line 21 – Col.

Art Unit: 2642

18, line 65 of Benash et al.) It would have been obvious for one of ordinary skill in the art at the time the invention was made to have allowed for the use of virtual numbers or subscribers in Cox inasmuch as the motivation for using virtual instead of actual numbers or subscribers is also old and well known, i.e., avoiding wasted system resources for dedicated elements, bypassing physical or logical constraints such as being able to dial a virtual number from anywhere using a number that need not conform to any telephony numbering standard(s), being able to access / operate a subscription or features of a subscription as if a subscriber were at a certain physical location even though he/she is not actually there, i.e., virtual office features, and being able to have more capacity in that again, a virtual subscription need not have physical, dedicated trunk lines for example. Moreover, Benash et al. teaches that virtual subscriptions can be implemented in an AIN environment as is the environment Cox operates in. (Abstract, Col. 12, lines 52 – 65, Col. 15, line 63 – Col. 16, line 20 of Benash et al.)

Note that the same advantages could be provided to Cox for the same motivation. Also note that the only difference between an actual subscriber and a virtual subscriber is again, a virtual subscriber has no dedicated elements associated with him/her, but still has his/her own number or identification information. Therefore, adding the virtual subscriber information would be done the same way and for the same reason it would be done for an actual subscriber as already discussed by Cox above.

As to claims 26, 37, and 38, see the rejection of claims 2, 7, and 8, respectively.

Art Unit: 2642

As to claims 39, 40, 45, and 46, see the rejection of claims 35 and 44 and note that as already discussed, a dedicated element such as an access point is unnecessary with virtual subscriptions.

As to claims 41, 42, 47, and 48, such is merely an obvious design choice or preference to one of ordinary skill in the art inasmuch as actual numbers or subscriptions can be both dialable and non-dialable. While Benash et al. discusses dialable virtual numbers, public telephones for example, many times are non-dialable though a user may dial and outbound call from it. 800 numbers, 911, and 411 are all "front-ends" to essentially non-dialable numbers. Even in terms of wiretapping a telephone line, once connections are made to the line being wiretapped, the listener is a virtual subscriber, but has no dialable number associated with him/her.

As to claims 43 and 49, see the rejection of claims 39, 40, 45, and 46, and note that the recited limitation is the very aspect of virtual subscriptions that allows such a feature. In other words, as discussed, an access point used to access a virtual subscription that access point is not associated with the virtual subscriber and so no triggering can occur, such as when AIN systems use an ANI trigger to trigger special call processing or routing from a known, actual access point such as a subscriber's home telephone line/number.

Response to Arguments

5. Applicant's arguments filed 10/19/2004 have been fully considered but they are not persuasive.

Applicant goes on at length regarding “virtual subscribers” yet no such limitation is recited anywhere in claims 1 – 34. Applicant seems to argue that the limitation “providing at least one service according to which said service provision means are able to set up calls in said at least one switching node in response to the request of a user of said at least one service.” inherently or indirectly suggests the argued virtual subscriber aspect. However, that limitation can still be interpreted as examiner did in the previous office action. In fact, that limitation describes the operation of any AIN network when a service is requested.

Applicant argues the same virtual aspect regarding Clark, but again, no limitation(s) reciting a virtual subscriber are found in those respective claims.

As to applicant’s arguments regarding claim 17, billing attributes do not change during the middle of a call, but are rather usually, if not always affected because of subscriber / user data changes such as a change in the form of payment, the subscriber modifies his/her service which involves different billing requirements. Moreover, as claimed, the service provision means, like in any AIN system would inherently have to perform an interception operation because if a user changes his/her data, such as no longer subscribing to a certain feature, that change must be reflected in triggering data so that the feature not subscribed to any more is no longer triggered when a call is made by / received by that user. Unless a user is able to directly access the service provider’s SCP, the service provisioning interface or means that a subscriber would use to change his/her data would have to be monitored so that the change could be relayed to and effected at the service provider level / SCP for example.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 5,467,388 (Redd, Jr. et al.) and US 5,668,862 (Bannister et al.) both teach the use of virtual subscriptions/numbers/subscribers.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Applicant's amendment as to new claims 35 – 49 necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE**

FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hector A. Agdeppa whose telephone number is 571-272-7480. The examiner can normally be reached on Mon thru Fri 9:30am - 6:00pm.

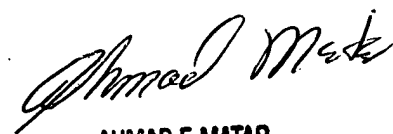
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ahmad F. Matar can be reached on 571-272-7488. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2642

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hector A. Agdeppa
Examiner
Art Unit 2642

H.A.A.
June 10, 2005



AHMAD F. MATAR
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2700